



Biobased Industry in Wisconsin

Presentation to the Governor's Consortium on
Biobased Industry
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BioIndustry Project Team:

- Energy Center of Wisconsin
- Center for Technology Transfer
- Center on Wisconsin Strategy
- GDS Associates
- Resource Strategies, Inc.

Role of the Briefing Paper

- Provide political/policy context for biobased economy
- Provide background on global, regional, and state efforts that currently exist to support biobased economy
- Examine features of the state that could support a biobased economy, including land and human resources

Why Bioindustry?

- Energy independence
- Rising fuel costs
- Regional economic development
- Benefits to farms and forestry operations
- Environmental benefits
- Technological innovation

Global Context

- Bioenergy:
 - Long used in developing countries
 - EU now investing heavily in biobased power
- Biofuels:
 - Brazil leads in ethanol production (40% all fuel in Brazil is ethanol); U.S. second
 - EU leads in biodiesel production
 - Biggest idea on horizon: cellulosic ethanol
- Bioproducts:
 - Canada, Australia have industry partnerships
 - U.S. federal government is leading research here

Midwest Context

- **Midwest Consortium for Sustainable Biobased Products and Bioenergy; Sun Grant Initiative**
 - Link land grant universities with DOE labs in the midwest
 - Goal: biobased economy roadmap
- **Iowa:** Biobased Products and Bioenergy Vision and Roadmap
- **Illinois:** Requirement that all buses run on 2% biodiesel blend
- **Michigan:** Center for Plant Products and Technology
- **Minnesota:** Renewable Fuels Standard, requires that all fuel sold in MN contain 20% ethanol by 2013.

Wisconsin Political/Policy Context

- Renewable Portfolio Standard
- Public Benefits Fund
- Tax Credits for Agriculture/Forestry
- Tax deductions for AFVs
- Task force on EE and Renewables
- Biofuels Initiative
- Working Lands Initiative

Wisconsin's Advantage

- Land:
 - 16M acres of farmland (45% WI land area)
 - 16M acres of forestland (46% WI land area)
 - 1 in 6 manufacturing jobs are related to forest products industry
- People:
 - High labor force participation
 - Skilled workforce in manufacturing
 - Robust workforce development system including DWD, job centers, tech colleges

WI Advantage, Cont.

- University System
 - UW system (26 campuses)
 - UW Extension
 - Technical College system (47 campuses)
- Industry Concentration (LQ data)
 - Top 40 industries are mostly manufacturing, pulp/paper, food and meat processing
 - High concentrations in grain farming, logging, vegetable farming, dairy industry

Most Important Advantage?

Long tradition of state-university partnership to solve economic and social problems:

“The Wisconsin Idea”

“[T]he Wisconsin tradition meant more than a simple belief in the people. It also meant a faith in the application of intelligence and reason to the problems of society. It meant a deep conviction that the role of government was not to stumble along like a drunkard in the dark, but to light its way by the best torches of knowledge and understanding it could find.”

-- Adlai Stevenson, 1952

Existing Biorefining Facilities in WI

- 32 farms with existing/planned anaerobic digesters (10 operational now – 9 manure, 1 duck litter)
- 4 operating, 1 planned ethanol plant
- 1 biodiesel producer
- 1 biomass-to-hydrogen producer
- 2 biomass cofiring plants

Promoting Bioindustry: General Policy Options

- Market Guarantees: Regulations governing access to the market and production or purchase obligations (e.g., RPS, RFS, procurement standards)
- Financial incentives (e.g., tax incentives, credits, rebates)
- Industry standards, permitting, and codes
- Education and information campaigns
- Investment in research and development
- Investment in support infrastructure (workforce training, transportation infrastructure, etc.)

Questions for Consortium

- Of the information contained in the paper, what is most crucial to you?
- What would you like to see further expanded/explained?
- What is your current sense of the major opportunities for Wisconsin, and major barriers in pursuing a biobased economic development plan?

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